ADVERTISED BID

CITY OF ST. LOUIS

OFFICE OF THE SUPPLY COMMISSIONER
1200 MARKET ST RM 324
ST LOUIS MO 63103-2842

... We agree to furnish the following articles to the City of St. Louis, free of any extra charges, in the quantity named and at the prices respectively stated:

REQUEST FOR QUOTE	PAGE
4201300348	1

ADDRESS CORRESPONDENCE TO

TO

SHIP TO

LAMBERT AIRPORT
P O BOX 10036
ST LOUIS MO
63145

SEE TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS QUOTATION SHEET.

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/15/13				

REPLY DUE BY: 05/14/13 **12:00 O'CLOCK NOON**

NEEDED BY DATE	QUANTITY	UNIT	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	REQ LINE NUMBER : 0001 1	EA	AIRP	13R034801 2013 LEGACY STRIKER 3000 AIRPORT RESCUE & FIRE FIGHTING (ARFF) VEHICLE ACCORDING TO THE ATTACHED SPECIFICATIONS. ALL DEVIATIONS MUST BE STATED ON THE ATTACHED DEVIATION SHEETS. BIDDERS PLEASE CHECK/COMPLETE BELOW: ( )FREIGHT IS INCLUDED IN THE QUOTED UNIT PRICE ( )WE WILL CHARGE FOR FREIGHT/DELIVERY IN THE AMT OF: $. FOR ADDITIONAL INFORMATION CONTACT: MICHAEL BERNICH AT 314-551-5322 BRAND ----------PRODUCT NO. ---------- STATE BEST GUARANTEED DELIVERY: A.R.O. ---------- ALL ITEMS SHALL BE F.O.B. DESTINATION * VENDORS SHOULD NOTE IF THEY ARE MINORITY OR WOMEN OWNED BUSINESS (CHECK) MBE ---------- WBE----------			
					TOTAL ➡	

NAME OF FIRM	**STATE DELIVERY:**	COMPTROLLER Date
ADDRESS	CALENDAR DAYS	
CITY STATE	SIGNED BY:	SUPPLY COMMISSIONER Date
PHONE Area Code ( )		

ADVERTISED BID

CITY OF ST. LOUIS

OFFICE OF THE SUPPLY COMMISSIONER
1200 MARKET ST RM 324
ST LOUIS MO 63103-2842

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REQUEST FOR QUOTE	PAGE
4201Q0348	2

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04/15/13				

REPLY DUE BY: 05/14/13 **12:00 O'CLOCK NOON**

NEEDED BY DATE	QUANTITY	UNIT	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

LIST ITEMS MANUFACTURED, ASSEMBLED OR PRODUCED
IN A FOREIGN COUNTRY ON THIS FORM.

IF FREIGHT OR DELIVERY CHARGE TO BE BILLED, IT MUST
BE INCLUDED IN THIS QUOTE OR IT WILL NOT BE PAID.
( ) FREIGHT IS INCLUDED IN THE QUOTED UNIT PRICE.
( ) WE WILL CHARGE FREIGHT/DELIVERY IN THE AMOUNT OF:
$

PLEASE TYPE NAME OF CONTACT PERSON FOR THIS BID:
NAME:

FAX:

E-MAIL:

NOTICE RE: ORDINANCE #60643

A CITY OF ST. LOUIS BUSINESS LICENSE IS REQUIRED IF
YOU MEET ANY OF THE FOLLOWING (CHECK AS APPROPRIATE):
----- BUSINESS IS LOCATED WITHIN THE CITY LIMITS
----- DELIVERY WITHIN CITY LIMITS IS BY COMPANY TRUCK
----- SALES CALLS MADE WITHIN THE CITY LIMITS

**********NEW BIDDING INFORMATION**********
FOR ALL BIDS, THE CITY RESERVES THE RIGHT TO MAKE A
SPLIT AWARD. IF A BIDDER DOES NOT WISH TO ACCEPT A
SPLIT BID AWARD, HE/SHE MUST STATE "ALL OR NONE" ON BID
OFFER, SEE BELOW. BIDDER MUST CHECK ONE OF FOLLOWING:
------ BIDDING "ALL OR NONE"

TOTAL ➡

NAME OF FIRM	**STATE DELIVERY:**	COMPTROLLER Date
ADDRESS	CALENDAR DAYS	
CITY STATE	SIGNED BY:	SUPPLY COMMISSIONER Date
PHONE Area Code ( )		

ADVERTISED BID

CITY OF ST. LOUIS

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REQUEST FOR QUOTE	PAGE
4201300348	3

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04/15/13				

REPLY DUE BY: 05/14/13 **12:00 O'CLOCK NOON**

NEEDED BY DATE	QUANTITY	UNIT	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	------ SPLIT AWARD ACCEPTABLE *** BID RESULTS MAY BE AVAILABLE 30 DAYS AFTER OPENING DATE. IF YOU DESIRE BID RESULTS, PLEASE INCLUDE A SELF ADDRESSED STAMPED ENVELOPE WITH YOUR BID. *** ALL BIDS MUST INCLUDE COMPLETED "BUY AMERICAN" AND "MINORITY/WOMEN UTILIZATION STATEMENT" FORMS, AND ANY SUPPLEMENTAL INFORMATION REQUIRED. ANY QUESTIONS SHOULD BE DIRECTED TO THE BUYER. ********** WEBSITE INFORMATION ********** * * * TO DOWNLOAD SUPPLY BIDS GO TO: * * * * HTTP://STLOUIS-MO.GOV/SUPPLY/BID-NOTICES.CFM * * * * CLICK ON BID NOTICES * ********** ++++++++++ BIDS WILL BE AWARDED BASED ON OFFICIAL SPECIFICATIONS PROVIDES BY SUPPLY DIVISION ONLY & ANY RELATED ADDENDA. ALL INQUIRIES MUST BE IN WRITING (LETTER/E-MAIL/FAX) TO THE FOLLOWING BUYER: JOHN CASSIDY - CASSIDYJ@STLOUIS-MO.GOV FAX# 314-622-4141 PHONE# 314-622-4596 ++++++++++					
					TOTAL →	

NAME OF FIRM	**STATE DELIVERY:**	COMPTROLLER Date
ADDRESS	CALENDAR DAYS	
CITY STATE	SIGNED BY:	SUPPLY COMMISSIONER Date
PHONE Area Code ( )		

AIRPORT AUTHORITY
LAMBERT ST. LOUIS INTERNATIONAL AIRPORT
SPECIFICATIONS FOR A 2013 LEGACY STRIKER 3000
AIRPORT RESUCE AND FIRE FIGHTNG VEHICLE (ARFF)
REQUISITION # 42013RQ348

STATE ANY DEVIATIONS

3.5. VEHICLE PROCUREMENT SPECIFICATION, CLASS 5 PROCUREMENT SPECIFICATION AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) VEHICLE

1. SCOPE. This Procurement Specification (PS) covers a commercially produced diesel engine driven ARFF vehicle for an Index D airport. It includes a 3000 gallon water/Aqueous Film Forming Foam (AFFF) fire suppression system: 450 lb. potassium-based dry chemical and 460 lb. halogenated agent complementary systems.

The ARFF vehicle is intended to carry rescue and firefighting equipment for the purpose of rescuing aircraft passengers, preventing aircraft fire loss, and combating fires in aircraft.

2. CLASSIFICATION. The ARFF vehicle covered by this PS are classified in accordance with Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, Section 315, Aircraft Rescue and Firefighting: Index Determination; Section 317, Aircraft Rescue and Firefighting: Equipment and Agents; and Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles, as follows:

Airport Index	Vehicle Class	Minimum Rated Capacities (gallons/liters)
Index D	5	3000 gallon/11,356 liter water/AFFF solution
Index D	5	3500 gallon/13,249 liter water/AFFF solution
Index D	5	4000 gallon/17034 liter water/AFFF solution
Index D	5	4500 gallon/17,034 liter water/AFFF solution

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS. The ARFF vehicle will be in accordance with the applicable requirements of National Fire Protection Association (NFPA) 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition), and AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles.

3.1 General Administration Requirements.

3.1.1 Manuals. Technical manuals will consist of operator, service, and parts manuals. All manuals are required to be provided in hardcopy and in digital format on CDs when requested.

3.1.1.1 Technical manuals. The overall format for the manuals will be commercial. Each technical manual will have a title page. Line art will be used to the maximum extent possible for illustrations and parts lists. One complete set of engine and transmission parts, service and operator's manuals will be packed with each vehicle.

a. The contractor will provide digitized manuals in CD format when requested in addition to or in place of printed paper copies.

Manuals cont.

b. The contractor will provide two complete sets of hardcopy manuals and / or CDs when requested.

3.1.1.1.1 Operator's manual. The operator's manual will include all information required for the safe and efficient operation of the vehicle, including fire extinguishing systems, equipment, and any special attachments or auxiliary support equipment. As a minimum, the operator's manual will include the following:

a. The location and function of all controls and instruments will be illustrated and functionally described.

b. Safety information that is consistent with the safety standards established by the Occupational Safety and Health Administration (OSHA) and NFPA.

c. All operational and inspection checks and adjustments in preparation for placing the vehicle into service upon receipt from the manufacturer.

d. Tie down procedures for transport on a low-boy trailer.

e. Warranty information and the period of the warranty coverage for the complete vehicle and for any component warranty that exceeds the warranty of the complete vehicle. Addresses and telephone numbers will be provided for all warranty providers.

f. General description and necessary step-by-step instructions for the operation of the vehicle and its fire extinguishing system(s) and auxiliary equipment.

g. A description of the post-operational procedures (draining, flushing, re-servicing, et cetera).

STATE ANY DEVIATIONS

Operator's manual cont.

h. Daily maintenance inspection checklists that the operator is expected to perform, including basic troubleshooting procedures.

i. Disabled vehicle towing procedures.

j. Procedures and equipment required for changing a tire.

k. Schedules (hours, miles, time periods) for required preventative maintenance and required periodic maintenance.

l. Line art drawing of the vehicle, including panoramic views (front, rear, left, and right sides) showing basic dimensions and weights (total vehicle and individual axle weight for the unloaded and fully loaded vehicle). For the purposes of this AC, "unloaded" is defined as a lack of agent, occupants and compartment load, and "loaded" is defined as including agent, occupants and compartment load.

3.1.1.1.2 Service manual. The service manual will identify all special tools and test equipment required to perform servicing, inspection, and testing. The manual will cover troubleshooting and maintenance as well as minor and major repair procedures. The text will contain performance specifications, tolerances, and fluid capacities; current, voltage, and resistance data; test procedures; and illustrations and exploded views as may be required to permit proper maintenance by qualified vehicle mechanics. The manual will contain an alphabetical subject index as well as a table of contents. The service manual will contain at least the following, where applicable:

a. Firefighting system schematic(s).

b. Hydraulic schematic.

c. Pneumatic schematic.

d. Electrical schematic.

e. Winterization schematic.

f. Fuel schematic.

g. Schedules for required preventative maintenance and required periodic maintenance.

h. Lubrication locations, procedures, and intervals for parts of the vehicle and equipment that require lubrication.

STATE ANY DEVIATIONS

3.1.1.1.3 Parts identification manual. The parts manual will include illustrations or exploded views (as needed) to identify properly all parts, assemblies, subassemblies, and special equipment. All components of assemblies shown in illustrations or exploded views will be identified by reference numbers that correspond to the reference numbers in the parts lists. All purchased parts will be cross-referenced with the original equipment manufacturer's (OEM) name and part number. The parts identification manual will provide the description and quantity of each item used for each vehicle. The size, thread dimensions, torque specifications, and special characteristics will be provided for all nonstandard nuts, bolts, screws, washers, grease fittings, and similar items. The manual will contain a numerical index. The parts manual will contain a list of all of the component vendor names, addresses, and telephone numbers referenced in the parts list.

3.1.2 Painting, plating, and corrosion control.

3.1.2.1 Finish. Exterior surfaces will be prepared, primed, and painted in accordance with all of the paint manufacturer's instructions and recommendations. Vehicles will be painted and marked in accordance with AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport. The interior finish of all compartments will be based on the manufacturer's standard production practice. This may include painting, texturing, coating or machine swirling as determined by the manufacturer. All bright metal and anodized parts, such as mirrors, horns, light bezels, tread plates, and roll-up compartment doors, will not be painted. All other surfaces capable of being painted must be in the appropriate yellow-green color.

3.1.2.2 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, Dissimilar Metals, will not be in contact with each other. Metal plating or metal spraying of dissimilar base metals to provide electromotively compatible abutting surfaces are acceptable. The use of dissimilar metals separated by suitable insulating material is permitted, except in systems where bridging of insulation materials by an electrically conductive fluid can occur.

3.1.2.3 Protection against deterioration. Materials that deteriorate when exposed to sunlight, weather, or operational conditions normally encountered during service will not be used or will have a means of protection against such deterioration that does not prevent compliance with performance requirements. Protective coatings that chip, crack, or scale with age or extremes of climatic conditions or when exposed to heat will not be used.

3.1.2.4 Reflective stripes. A minimum eight (8) inch horizontal band of high gloss white paint or white reflective tape (Retroreflective, ASTM-D 4956-09, Standard Specification for Retroreflective Sheeting for Traffic Control, TYPE III & above) must be applied around the vehicle's surface.

3.1.2.5 Lettering. The manufacturer will apply the airport's 'Name' and 'Insignia' (if available) in a contrasting color or by decal on both sides of the vehicle in long radius elliptical arches above and below the lettering center line. The size of the lettering will be a minimum of 2½-inches to a maximum of 6-inches. Reflective lettering is allowed if the material is the same as that which is used for the reflective stripe (as specified in AC 150/5210-5).
3.1.3 Vehicle identification plate. A permanently marked identification plate will be securely mounted at the driver's compartment. The identification plate will contain the following information:

a. NOMENCLATURE

b. MANUFACTURER'S MAKE AND MODEL

c. MANUFACTURER'S SERIAL NUMBER

d. VEHICLE CURB WEIGHT: kg (pounds)

e. PAYLOAD, MAXIMUM: kg (pounds)

Lettering cont.

f. GROSS VEHICLE WEIGHT (GVW): kg (pounds)

g. FUEL CAPACITY AND TYPE: gals (gallons)

h. DATE OF DELIVERY (month and year)

i. WARRANTY (months and km (miles))

j. CONTRACT NUMBER

k. PAINT COLOR AND NUMBER

A second permanently marked information data plate will be securely mounted on the interior of the driver's compartment. The plate will contain the information required by NFPA 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition), Section 1.3.5 Vehicle Information Data Plate. A single plate that combines or contains the information required for both plates are acceptable.

3.1.4 Environmental conditions.

3.1.4.1 Vehicle operation and storage temperature conditions will vary with geographical location. Thus, the locality temperature range can go from -40° to 110°F. Refer to NFPA 414 for vehicle winterization criteria.

3.1.4.2 Extreme temperature range. The vehicle will be capable of satisfactory storage and operation in temperatures ranging from -40° to 110°F. The vehicle will be equipped with a cab, chassis, and agent winterization system, permitting operation at -40°F. The winterization system will not detract from the performance of the vehicle or the firefighting system in ambient temperatures up to 110°F. The vehicle chassis winterization system will maintain the engine coolant, lubricants, fuel, and electrical systems operational at ambient temperatures of -40°F. The vehicle agent winterization system will provide sufficient insulation and heating capacity, by means of hot circulating liquids and/or forced air heat exchangers, to permit satisfactory operation of the vehicle and firefighting systems for a 2-hour period at ambient temperatures as low as -40° F with the vehicle fully operational and the engine running. At the end of this 2-hour period, the vehicle will be capable of successfully discharging its agents. All compartments not winterized will be marked as such on the interior of the compartment. The marking will state that the compartment is not winterized and cannot be used for the storage of items capable of freezing.

3.1.5 Reduction of potential foreign object damage. All loose metal parts, such as pins, will be securely attached to the vehicle with wire ropes or chains. Removable exterior access panels, if provided, will be attached with captive fasteners.

3.1.6 Vehicle Mobility.

3.1.6.1 Operating terrain. The vehicle will be capable of operating safely on paved roads, graded gravel roads, cross country terrain, and sandy soil environments. Cross country terrain consists of open fields, broken ground, and uneven terrain. An off-road, high-mobility suspension system resulting in no more than 0.5 Grms acceleration at the driver's seat of the vehicle when traversing an 8-inch (20 cm) diameter half round at 35 mph (56 kph) must be provided. The suspension design by which the manufacturer meets the suspension performance requirements is at the manufacturer's discretion.

3.1.6.2 Gradeability. The fully loaded vehicle will be able to ascend any paved slope up to and including 50-percent.

3.1.6.3 Side slope stability. The fully loaded vehicle will be stable on a 30° side slope when tested in accordance with NFPA 414.

3.1.6.4 Cornering stability. The fully loaded vehicle will be stable in accordance with NFPA 414 when tested in accordance with NFPA 414.

3.2 Weights and dimensions.

3.2.1 Overall dimensions. The maximum dimensions listed below are desirable to ensure vehicles can be accommodated in existing fire stations. Likewise, the overall dimensions should be held to a minimum that is consistent with the best operational performance of the vehicle and the design concepts needed to achieve this performance and to provide maximum maneuverability in accordance with NFPA 414.

Vehicle Capacity/Dimensions 3000 Gallon:

Length (inches/cm) 480/1219
Width (inches/cm, excluding mirrors) 124/315
Height (inches/cm) 154/391

3.2.2 Angles of approach and departure. The fully loaded vehicle will have angles of approach and departure of not less than 30°.

3.2.3 Field of vision. The vehicle will have a field of vision in accordance with NFPA 414.

3.2.3.1 Mirrors. Combination flat and convex outside rearview mirrors will be installed on each side of the cab. The flat mirrors will be of the motorized remote control type, providing not less than 60° horizontal rotational viewing range. The flat mirrors will also have electrically heated heads. Mirror remote and heating controls will be located on the instrument panel within reach of the seated driver. To provide the driver a clear view of the area ahead of the vehicle and to eliminate potential blind spots, a rectangular mirror will be installed on the lower corner of each side of the windshield, having a minimum area of 35 square inches. The vehicle will have a back-up (rear-view) camera with a display monitor mounted above the driver in the cab. Cameras and monitors that are designed to replace the function of the side-view mirrors are not an approved option in this specification.

3.3 Chassis and vehicle components.

3.3.1 Engine. The vehicle will have a turbocharged diesel engine that is certified to comply with the Environmental Protection Agency (EPA) and state laws for off-highway emission requirements at the time of manufacture. The engine and transmission must operate efficiently and without detrimental effect to any drive train components when lubricated with standard, commercially available lubricants according to the recommendations of the engine and transmission manufacturers.

3.3.1.1 Acceleration. The fully loaded vehicle will accelerate from 0 to 50 miles per hour (mph) on a level paved road within 35 seconds.

3.3.1.2 Maximum speed. The fully loaded vehicle will attain a minimum top speed of 70 mph on a level, paved road.

STATE ANY DEVIATIONS

3.3.1.3 Pump and roll on a 40-percent grade. The fully loaded vehicle will be capable of pump and roll operations on a paved, dry, 40-percent grade in accordance with NFPA 414.

3.3.1.4 Altitude. Where justified, the vehicle, including the pumping system, will be designed for operation at 2,000 feet above sea level.

3.3.2 Engine cooling system. The engine cooling system will be in accordance with NFPA 414. A label will be installed near the engine coolant reservoir reading "Engine Coolant Fill."

3.3.3 Fuel system. The fuel system will be in accordance with NFPA 414.

3.3.3.1 Fuel priming pump. The vehicle will be equipped with an electric or pneumatic fuel pump in addition to the mechanical fuel pump. The electric/pneumatic pump will be used as a priming pump capable of re-priming the engines fuel system.

3.3.3.2 Fuel tank. The vehicle will have one or two fuel tanks with a minimum usable capacity in accordance with NFPA 414, as amended by NFPA 414. Each tank will have a fill opening of 3 inches minimum, readily accessible to personnel standing on the ground and designed to prevent fuel splash while refueling. Each tank will be located and mounted so as to provide maximum protection from damage, exhaust heat, and ground fires. If more than one tank is furnished, means will be provided to assure equalized fuel level in both tanks. An overturn fuel valve will be provided for each tank to prevent spillage in the event of a rollover. Each fuel tank must be prominently labeled "Diesel Fuel Only."

STATE ANY DEVIATIONS

3.3.4 Exhaust system. The exhaust system will be in accordance with NFPA 414. The exhaust system will be constructed of high grade rust resistant materials and protected from damage resulting from travel over rough terrain. The muffler(s) will be constructed of aluminized steel or stainless steel. Exhaust system outlet(s) will be directed upward or to the rear, away from personnel accessing equipment compartments and the engine air intake, and will not be directed toward the ground.

3.3.5 Transmission. A fully automatic transmission will be provided. The transmission will be in accordance with NFPA 414. (2007 Edition) as amended by -10E A/C plus the following:

The transmission shall be an Allison Gen 4 Model 4800 EVS, automatic, multi-speed, electronically controlled transmission, fully compatible and certified for use with the electronically controlled engine. This transmission shall have a minimum of seven (7) forward and one (1) reverse speeds.

3.3.6 Driveline. The vehicle driveline will be in accordance with NFPA 414. If the driveline is equipped with a differential locking control, a warning/caution label will be placed in view of the driver indicating the proper differential locking/un-locking procedures. The operator's manual will also include a similar warning/caution. All moving parts requiring routine lubrication must have a means of providing for such lubrication. There must be no pressure lubrication fittings where their normal use would damage grease seals or other parts.

3.3.7 Axle capacity. Each axle will have a rated capacity, as established by the axle manufacturer, in accordance with NFPA 414.

3.3.8 Suspension. The suspension system will be in accordance with NFPA 414 and AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles.

3.3.9 Tires and wheels. Tires and wheels will be in accordance with NFPA 414. The vehicle will be equipped with single tires and wheels at all wheel positions. The vehicle will be equipped with tubeless steel belted radial tires with non-directional on/off-road type tread mounted on disc wheel assemblies. Tire and wheel assemblies will be identical at all positions. Tires and wheels will be certified by the manufacturer for not less than 25 miles of continuous operation at 60 mph at the normal operational inflation pressure.

A spare tire and wheel assembly will be provided; however, the spare tire and wheel assembly are not required to be mounted on the vehicle. Tires will be new. Retreads, recaps, or re-grooved tires will not be permitted. Tire bead locks, where justified, may be installed on all tires and rims.

3.3.10 Towing connections. The vehicle will be equipped with towing connections in accordance with NFPA 414. The vehicle will be designed for flat towing; the capability to lift and tow the vehicle is not required. The tow connections may intrude into the 30 degree approach angle.

3.3.11 Brake system. The vehicle will be equipped with a multi-channel all-wheel antilock brake system with at least one channel for each axle. The brakes will be automatic, self-adjusting and fully air-actuated. Brakes will be in accordance with CFR 49 CFR 393.40 through 393.42(b)), 393.43, and 393.43 through 393.52. The braking system, complete with all necessary components will include:

a. Air compressor having a capacity of not less than 16 standard cubic feet per minute (scfm).

b. Air storage reservoir(s), each tank equipped with drain (bleed) valves, and with safety and check valves between the compressor and the reservoir tank.

c. Automatic moisture ejector on each air storage reservoir. Manual air tank drains are acceptable if they are

STATE ANY DEVIATIONS

Brake system cont.

labeled, are centrally located in one compartment and are accessible by an individual standing at the side of the vehicle.

d. Automatic slack adjusters on cam brakes or internal self-adjusting brakes on wedge brakes on all axles.

e. Spring set parking brakes.

All components of the braking system will be installed in such a manner as to provide adequate road clearance when traveling over uneven or rough terrain, including objects liable to strike and cause damage to the brake system components. No part of the braking system will extend below the bottom of wheel rims, to ensure, in case of a flat tire, that the weight of the vehicle will be supported by the rim and the flat tire and not be imposed on any component of the braking system. Slack adjusters and air chambers will be located above the bottom edge of the axle carrier.

3.3.11.1 Air dryer. A replaceable cartridge desiccant air dryer will be installed in the air brake system. The dryer will have the capability of removing not less than 95 percent of the moisture in the air being dried. The dryer will have a filter to screen out oil and solid contaminants. The dryer will have an automatic self-cleaning cycle and a thermostatically controlled heater to prevent icing of the purge valve.

3.3.11.2 Compressed air shoreline or vehicle-mounted auxiliary air compressor. A flush mounted, check valved, auto-eject compressed air shoreline connection will be provided to maintain brake system pressure while the vehicle is not running. The shoreline will be flush mounted (not to extend outside the body line), located on the exterior of the vehicle, either on the left side rear corner of the cab, or at the rear of the vehicle. In lieu of a compressed air shoreline connection, the vehicle may be equipped with a 110 volt shoreline connected

Compressed air shoreline or vehicle-mounted auxiliary air compressor cont.

STATE ANY DEVIATIONS

vehicle-mounted auxiliary air compressor. In lieu of a compressed air shoreline connection, the vehicle may be equipped with an electrical shoreline connected vehicle mounted auxiliary air compressor.

3.3.12 Steering. The vehicle will be equipped with power steering

3.3.12.1 Steering effort. The steering system performance will be in accordance with NFPA 414 (2007 Edition)

3.3.12.2 Turning diameter. The fully loaded vehicle will have a wall to wall turning diameter of less than three times the overall length of the vehicle in both directions in accordance with NFPA 414 as amended by -10E A/c plus the following:

The rearmost axle of the rear tandem axle shall be include, mechanical steering provisions to provide a 7° degree cramp angle enhancing tire life.

3.3.13 License plate bracket. A lighted license plate bracket will be provided at the left rear and left front of the vehicle. The location of the left front bracket will be placed so as not to interfere with the operation of firefighting systems.

3.4 Cab. The vehicle will have a fully enclosed two door cab of materials which are corrosion resistant, such as aluminum, stainless steel, or glass reinforced polyester construction. Steps and handrails will be provided for all crew doors, and at least one grab handle will be provided for each crew member, located inside the cab for use while the vehicle is in motion. The lowermost step(s) will be no more than 22 inches above level ground when the vehicle is fully loaded. A tilt and telescoping steering column will be provided.

STATE ANY DEVIATIONS

3.4.1 Windshield and windows. The windshield and windows will be of tinted safety glass. Each door window will be capable of being opened far enough to facilitate emergency occupant escape in the event of a vehicle accident. The vehicle windows will have an electric control system.

3.4.2 Cab interior sound level. The maximum cab interior sound level will be in accordance with NFPA 414.

3.4.3 Instruments and controls. All instruments and controls will be illuminated and designed to prevent or produce windshield glare. Gauges will be provided for oil pressure, coolant temperature, and automatic transmission temperature. In addition to the instruments and controls required by NFPA 414, the following will be provided within convenient reach of the seated driver:

a. Master warning light control switch.

b. Work light switch(es).

c. Compartment "Door Open" warning light and intermittent alarm that sounds when a compartment door is open and the parking brakes are released or the transmission is in any position other than neutral.

3.4.4 Windshield deluge system. The vehicle will be equipped with a powered windshield deluge system. The deluge system will be supplied from the agent water tank and will have an independent pumping system. The deluge system activation switch will be located within reach of the seated driver and turret operator.

STATE ANY DEVIATIONS

3.4.5 Forward Looking Infrared (FLIR). A forward looking infrared (FLIR) camera and in-cab monitor, meeting the requirements of NFPA 414 will be provided. In addition, the FLIR monitor described in NFPA 414 will have a minimum dimension of 10 in (25 cm) (measured diagonally) and be located in a position where it is visible to both the seated driver and turret operator.

3.4.6 Climate control system. The offeror/contractor's standard heater/defroster and air conditioning system will be provided. The climate control system will induct at least 60 cubic feet per minute of fresh air into the cab. Cab mounted components will be protected from inadvertent damage by personnel.

3.4.7 Seats. The driver seat will be adjustable fore and aft and for height. The turret operator's seat, located to the right front of the driver's seat, will be a fixed (non-suspension) type. Each seat will be provided with a Type 3 seat belt assembly (i.e., 3-point retractable restraint) in accordance with CFR 49 CFR 571.209. Seat belts must be of sufficient length to accommodate crew members in full Personal Protective Equipment (PPE).

3.4.7.1. Seat Options. Two types of seat options are allowed in the vehicle. A standard seat contains a hard/fixed back. For these seats, a remote-mounted bracket designed to store a Self-Contained Breathing Apparatus (SCBA) will be provided. The remote-mounted bracket for the driver and turret operator (at a minimum) must be placed inside the cab. The brackets for seat positions #3 and #4 may be placed outside of the cab if necessary. An SCBA seat, on the other hand, contains an opening which can accommodate someone wearing an SCBA.
Seats: Driver's standard//Turret #3, #4 shall be SCBA style.

STATE ANY DEVIATIONS

3.4.8 Windshield wipers and washer. The vehicle will be equipped with electrically powered windshield wipers. The wiper arms and blades will be of sufficient length to clear the windshield area described by SAE J198, Windshield Wiper Systems -Trucks. Individual wiper controls will include a minimum of two speed settings and an intermittent setting. The wiper blades will automatically return to a park position, out of the line of vision. The vehicle will be equipped with a powered windshield washer system, including an electric fluid pump, a minimum one gallon fluid container, washer nozzles mounted to the wiper arms (wet arms), and a momentary switch.

3.4.9 Warning signs. Signs that state "Occupants must be seated and wearing a seat belt when apparatus is in motion" will be provided in locations that are visible from each seated position in accordance with NFPA 414.

3.4.10 Lateral accelerometer and/or stability control system. The vehicle will be equipped with a lateral accelerometer and/or an electronic stability control system in accordance with NFPA 414.

3.4.11 Monitoring and Data Acquisition System (MADAS). The vehicle will be equipped with a MADAS as prescribed by NFPA 414.

3.5 Body, compartments, and equipment mounting.

3.5.1 Body. The vehicle will have a corrosion-resistant body.

3.5.2 Compartments. The vehicle body will have lighted compartments in accordance with NFPA 414 with a minimum of 10 cubic feet of enclosed storage space.

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3.5.2.1 Compartment doors. Storage compartments will have clear anodized aluminum, counterbalanced, non-locking, roll-up or single hinged doors as determined by the manufacturer. Door latch handles on roll-up doors will be full-width bar type. Door straps will be provided to assist in closing the compartment doors when the rolled up or hinged door height exceeds six feet above the ground.

3.5.2.2 Scuffplates. Replaceable scuffplates will be provided at each compartment threshold to prevent body damage from sliding equipment in and out of the compartments. The scuffplates will be securely attached to the compartment threshold but will be easily replaceable in the event of damage.

3.5.2.3 Drip rails. Drip rails will be provided over each compartment door.

3.5.2.4 Shelves. An adjustable and removable compartment shelf will be provided for every 18 inches of each vertical storage compartment door opening. Shelving adjustments will require no more than common hand tools, and will not require disassembly of fasteners. Shelves will support a minimum of 200 pounds without permanent deformation. Each shelf will be accessible to crew members standing on the ground or using a pull out and tip-down configuration. Each shelf will have drain holes located so as to allow for drainage of any water from the stowed equipment.

3.5.2.5 Drainage mats. Each compartment floor and shelf will be covered with a removable black mat designed to allow for drainage of any water from the stowed equipment.

3.5.3 SCBA storage tubes. A single compartment or tubes for storage of four SCBA bottles will be provided. If tubes are provided; two will be installed on each side of the vehicle. The tubes will be of sufficient size to accommodate the procuring agencies SCBA cylinders.

3.5.4 Ladder, handrails, and walkways. Ladder, stepping, standing, and walking surfaces will be in accordance with NFPA 414. Handrails will be provided in accordance with NFPA 414. The lowermost step(s) or ladder rungs will be no more than 22 inches (56 cm) above level ground when the vehicle is fully loaded. The lowermost steps may extend below the angle of approach or departure or ground clearance limits if they are designed to swing clear. The tread of the bottom steps must be at least 8 inches (20 cm) in width and succeeding steps at least 16 inches (40 cm) in width. The full width of all steps must have at least 6 inches (15 cm) of unobstructed toe room or depth when measured from, and perpendicular to, the front edge of the weight-bearing surface of the step.

3.6 Agent system.

3.6.1 Agent (fire) pump. The vehicle will be equipped with a centrifugal pump capable of providing the performance specified herein as prescribed by NFPA 414(2007 Edition_ as amended by -10E A/C plus the following:

a. An hour meter shall be installed adjacent to the water pump to record the time in hours that the water pump is in operation.

b. The housing and the impeller of the water pump shall be made of a bronze material to provide corrosion resistance for the life cycle of the vehicle. No exceptions.

3.6.1.1 Agent system piping. All piping, couplings, and valves and associated components that come into contact with the agent will be in accordance with NFPA 414. The piping shall be made of 304L stainless steel. No exceptions.

3.6.1.2 Tank to pump connection. A check valve and shutoff valve will be provided in each tank to pump line.

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3.6.1.3 Piping, couplings, and valves. All agent system piping will conform to NFPA 414 criteria.

3.6.1.4 Overheat protection. The agent system will be equipped with an overheat protection system in accordance with NFPA 414. Overheat protection is not required on vehicles utilizing a pre-mixed pressurized foam system.

3.6.1.5 Pressure relief valves. The agent system will be equipped with pressure relief valves in accordance with NFPA 414.

3.6.1.6 Drains. The agent system will be equipped with a drainage system in accordance with NFPA 414.

3.6.2 Water tank. The vehicle will have a water tank with a manufacturer certified minimum capacity of at least 3000 gallons.

3.6.2.1 Water tank construction. The water tank will be constructed of passivated stainless steel, polypropylene, or Glass Reinforced Polyester (GRP) construction. All materials used will be capable of storing water, foam concentrate, and water/AFFF solutions.

3.6.2.2 Water tank overhead fill cover and drain. The water tank will be equipped with a 20 inch fill tower. The tower will be designed to allow for video inspection of the water tank interior. The water tank will incorporate a drainage system in accordance with NFPA 414.

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3.6.2.3 Water tank overflow system and venting. The water tank will incorporate a venting system to relieve pressure on the tank during fill and discharge operations at maximum flow rates. It will have an overflow system to relieve excess fluid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in the track of any of the tires. Tank vent hoses will be of the non-collapsible type.

3.6.2.4 Water tank top fill opening. A top fill opening of not less than 8 inches internal diameter with a readily removable ¼-inch mesh strainer will be provided. The fill opening may be incorporated as part of the manhole cover, and will be sized to accommodate a 2½-inch fill hose.

3.6.2.5 Water tank fill connections. The water tank will incorporate National Hose thread connections and will be in accordance with NFPA 414.

A 2.50 inch NSFHT female swivel fill connection equipped with a .25 inch strainer and a cap with a chain shall be mounted on each side of the vehicle. Each connection shall be equipped with a bleeder valve to bleed off air or water in the hose connected to it. Each connection shall be angled downward at 30 degrees and be furnished with chrome connections with rocker lugs including the plug/chain assembly.

A 4.50 inch NSFHT male fill connection equipped with a .25 inch strainer and a cap shall be provided on each side of the vehicle. Each connection shall be equipped with a bleeder valve to bleed off air or water in the hose connected to it. Each connection shall be angled downward at 30 degrees and be furnished with a 5.00 inch Storz connection including a plug/chain assembly.

If the vehicle is fitted with the "structural firefighting capability option," the additional requirements listed in paragraph 3.6.8 must be incorporated.

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3.6.3 Foam system.

3.6.3.1 Foam concentrate tank. The foam concentrate tank(s) will have a manufacturer certified working capacity sufficient for two tanks of water at the maximum tolerance specified in NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment for 3 to 6 percent foam concentrate (i.e., 7.0-percent).

3.6.3.1.1 Foam tank construction. The foam tank will be constructed of passivated stainless steel, polypropylene, or GRP construction. All materials used will be capable of storing foam concentrate.

3.6.3.1.2 Foam tank drain. The foam tank will incorporate a drain and drain valve. The valve will be on the left side of the vehicle and controlled by a crew member standing on the ground. The drain line will have a minimum 1½-inch I.D. The foam tank drain outlet will be located so that the contents of the tank can be drained into 5-gallon cans and 55-gallon drums. 3.6.3.1.3 Foam tank top fill trough. The foam tank will incorporate a top fill trough mounted in the top of the tank readily accessible to at least two crew members on top of the vehicle. The top fill trough will incorporate a cover, latch, and sealed so as to prevent spillage under any operating condition. The top fill trough will be designed to allow two standard 5gallon foam concentrate containers to be emptied simultaneously.
The top fill trough neck will extend sufficiently close to the bottom of the tank to reduce foaming to a minimum during the fill operation. The top fill trough will incorporate readily removable, rigidly constructed 10 mesh stainless steel, brass or polyethylene strainers. All components in and around the top fill trough will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.

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3.6.3.2 Foam tank fill connections. The foam tank will incorporate a 1.5-inch National Hose thread female hose connection on both sides of the vehicle to permit filling by an external transfer hose at flow rates up to 25-gpm. The connections will be provided with chained-on long handled plugs or rocker lug plugs. The top of the connections will be no higher than 48 inches above the ground and readily accessible. The fill lines will incorporate check valves and readily removable, rigidly constructed ¼-inch mesh strainers. All components in the foam tank fill system will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.

3.6.3.2.1 Foam tank vent and overflow system. The foam tank will incorporate a vent system to relieve pressure on the tank during fill and discharge operations at maximum flow rates and an overflow system to relieve excess liquid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in front of or behind any of the tires. Tank vent hoses will be of the non-collapsible type.

3.6.3.3 Foam transfer pump. A foam transfer pump will be provided and mounted in a compartment on the vehicle. The pump will be capable of transferring and drawing foam liquid concentrate at adjustable flow rates up to 25-gpm directly through the pump and loading connections (see 3.6.3.2). All materials and components that come in contact with the foam will be compatible with the foam concentrate.
The pump and its plumbing will have provisions for flushing with water from the water tank. A suitable length of hose with appropriate connections will be provided for filling the foam tank from an external foam storage container.

3.6.3.4 Foam flushing system. The foam concentrate system will be designed in accordance with NFPA 414 so that the system can be readily flushed with clear water.

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3.6.3.5 Foam concentrate piping. All metallic surfaces of the piping and associated components that come into contact with the foam concentrate will be of brass, bronze, or passivated stainless steel. The foam concentrate piping will be in accordance with NFPA 414.

3.6.4 Foam proportioning system. The vehicle will have a foam proportioning system for Aqueous Film-Forming Foam (AFFF) (whether 3-or 6-percent foam concentrate) in accordance with NFPA 414. If a fixed orifice plate system is used, a plate will be provided for each percentage foam concentrate; the additional plate will be securely mounted in a protected location on the vehicle. A fire vehicle mechanic will be able to interchange the plates using common hand tools.

3.6.5 Primary vehicle turret. The vehicle will be equipped with a standard roof-mounted turret, high reach extendable turret, and/or high flow bumper mounted turret to serve as the primary source of agent delivery, as specified below:

3.6.5.1. The vehicle will be equipped with a high reach extendable turret (capable of penetrating the second level of the New Large Aircraft (NLA) class of aircraft, in accordance with paragraph 3.6.5.2. The NLA class aircraft are equivalent to the 'Airplane Design Group VI' category, as specified in AC 150/5300-13, Airport Design.

3.6.5.2 High Reach Extendable Turret (capable of penetrating all aircraft except the second level of an NLA). The high reach extendable turret (HRET) must be in accordance with NFPA 414 and will have the vertical and horizontal reach necessary to service the highest placed engine of the aircraft being serviced. It will have a non-air-aspirating, constant flow, variable stream nozzle with dual flow rates for foam or water rated as specified in NFPA 414. The discharge pattern will be infinitely variable from straight stream to fully dispersed. The type of nozzle or turret drain will be per the manufacturer's recommendation. The ET will be controlled by one or two joysticks, each with a pistol grip handle, positioned for use by the driver and the crew member seated to the right of the driver (the turret operator). The cab design will provide clear visibility of the turret to both the driver and the turret operator with the turret in any position.

3.6.5.2.1 Video camera and monitor. The HRET will be equipped with a remote video camera and a cab mounted monitor. The system will be a complete video system consisting of a single color camera equipped with auto-focus and a cab controlled zoom. The camera/lens assembly will be protected from the heat of the fire and from the same climatic extremes as the truck. A color video monitor with a minimum dimension of 10 inches (measured diagonally) will be positioned in the cab within view of both the driver's and the turret operator's seated positions. One monitor may be provided for both the FLIR (see 3.4.5) and the camera with a switch to change between the FLIR and the camera.

3.6.5.2.2 Aircraft skin penetrator. The HRET will be equipped with an aircraft skin penetrator and agent application tool. The skin penetrator will be a minimum of 20 inches long, installed at the tip of the HRET, and connected to the water/AFFF agent discharge line. Agent application through the skin penetrator will be controlled from the cab. NOTE: If a high reach extendable turret is specified by the purchaser, a skin penetrating nozzle must be provided. The penetrating nozzle must be movable to allow for proper alignment of the penetrator to the aircraft fuselage for piercing operations. It must be capable of the minimum water/flow rate and pattern requirements of NFPA 414, Tables 4.1.1(c) and 4.1.1(d).

3.6.6 Bumper turret. The vehicle will be equipped with a joystick controlled, constant flow, non-air-aspirating, variable stream type low angle high volume dual rate (minimum 600/1200 GPM) bumper turret. The bumper turret will be capable of discharging at a minimum flow rate of foam or water as specified by the user, with a pattern infinitely variable from straight stream to fully dispersed. The bumper turret will be capable of automatic oscillation, with the range of oscillation adjustable up to 90° each side of center (left and right) with vertical travel capabilities of +45°/20° meeting section 4.20.2 in NFPA 414.

3.6.7 Preconnected handline(s). Two 200 foot, 1¾-inch pre-connected woven jacket handline(s), with a 1½-inch control valve and a pistol grip nozzle shall be provided, stored in a cross lay tray for ease of access, no exceptions. The preconnected handline(s) will be located on (or accessible from) each side of the vehicle. A safety system will be provided to prevent charging of the hose until the hose has been fully deployed. The handline(s) and nozzle(s) will be in accordance with NFPA 414, and will allow for a minimum of 95 gpm at 100 psi nozzle pressure. A control for charging each handline will be provided for operation by both the driver and the turret operator.

3.6.7.1 In addition, the vehicle will be equipped with the following handline: 100 feet of twinned 1-inch dry chemical / foam-water hose on a reel.

3.6.7.2 Undertruck Nozzles.

A minimum of four undertruck nozzles shall be supplied that will provide a sufficient foam\water combined spray pattern that will cover the total undertruck area as well as the inner sides of the wheels and tires. On/off controls shall be provided in the cab.

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3.6.8. Structural firefighting capability. The vehicle will be equipped with an agent system structural control panel, on the left side of the vehicle, operable while standing on the ground. Structural panel activation will be interlocked to operate only with the vehicle parking brakes set and the transmission in neutral position. Controls and instruments will be grouped by function. The control panel will be hinged or accessible from the rear for maintenance. Instruments will be lighted for night operation.

a. A 2.50 inch NSFHT female swivel fill connection equipped with a .25 inch strainer and a cap with a chain shall be mounted on each side of the vehicle. Each connection shall be equipped with a bleeder valve to bleed off air or water in the hose connected to it. Each connection shall be angled downward at 30 degrees and be furnished with chrome connections with rocker lugs including the plug/chain assembly.

b. A 4.50 inch NSFHT male fill connection equipped with a .25 inch strainer and a cap shall be provided on each side of the vehicle. Each connection shall be equipped with a bleeder valve to bleed off air or water in the hose connected to it. Each connection shall be angled downward at 30 degrees and be furnished with a 5.00 inch Storz connection including a plug/chain assembly.

3.6.8.1 The structural panel will include, as a minimum, the following:

a. Panel activation switch, including the panel lights.

b. Engine tachometer.

c. Engine oil pressure gauge with low pressure warning light.

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Structural panel cont.

d. Engine coolant temperature gauge with high temperature warning light.

e. A liquid filled gauge, or digital indicator for pump suction, -30 inches Hg vacuum to 600 psi.

f. A liquid filled gauge, or digital indicator for pump pressure, 0 to 600 psi.

g. An adjustable pump pressure using either an electronic pressure governor or manual control with a relief valve will be provided.

h. Foam or water selection.

i. Water and foam tank liquid level indicators, located adjacent to the water and foam tank fills.

3.6.8.2 The structural firefighting capability will also require installation of the following items:

a. A priming pump and control (for drafting using the large intake connection).

b. Water tank isolation valve.

c. Discharge connections. Two 2½-inch discharge connections with male National Hose threads will be provided. One 2½-inch discharge will be provided on each side of the vehicle. Each connection will be equipped with a cap, a quarter-turn control valve, a bleeder valve, and a pressure gauge. Each connection will be rated at 250-gpm minimum.

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Structural panel cont.

d. Intake connections. The vehicle will be equipped with one valved 4½-inch intake connection on the left side. The vehicle will be equipped with one valved 2½-inch intake connection on the left side adjacent to the 4½-inch intake connection with both having either a 30° or 45° turn-down fitting. The 4½-inch intake connection will have male National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a cap. The 2½-inch intake connection will have rocker lug female National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a plug. The vehicle will be capable of filling its water tank by pumping from a draft, a hydrant, or a nurse truck through either of the intake connections without the use of a hose from a discharge connection to a tank fill connection.

3.6.9 Primary turret discharge nozzle. The vehicle will be equipped with a combination dry chemical/ AFFF nozzle of the entrainment type on the primary turret mounted on the front bumper.

3.7 Dry chemical agent system. The vehicle will be equipped with a 450 lb. minimum capacity potassium bicarbonate dry chemical auxiliary agent system. The propellant gas cylinder will be replaceable within fifteen minutes by two crew members standing on the ground and be equipped with a cylinder replacement hoisting system. The propellant gas cylinder will be secured to withstand off-road operations. A pressure indicator will be visible to any person opening the tank fill cap. Blow-down piping will be directed beneath the vehicle. The dry chemical agent tank will include lifting rings and will have a nameplate indicating, as a minimum, the following:

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Dry chemical agent system cont.

a. Extinguishing agent.

b. Capacity.

c. Weight full.

d. Weight empty.

e. Operating pressure.

f. Hydrostatic test date.

g. Type of agent required for re-servicing.

3.7.1 Dry chemical primary turret discharge nozzle. The vehicle will be equipped with a turret mounted on the front bumper with a combination dry chemical/AFFF turret of the concentric direct injection type, designed to entrain the dry chemical agent within the AFFF solution discharge. Dry chemical discharge control will be within reach of the driver and the turret operator.

3.7.2 Dry chemical hose reel. A hose reel, equipped with at least 100 feet of dry chemical hose, will be mounted in a compartment. Handline agent and purge controls will be mounted in or adjacent to the compartment. All electrical components will be sealed against entry of water. The hose reel will have both electric and manual rewind provisions. The manual rewind handle will be bracket mounted and stored in the compartment. A quick acting control will be provided to activate the handline from the cab of the vehicle.

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3.8 Halogenated agent system.

3.8.1. A 460 lb. Halotron I clean agent system including an agent storage container, a hose reel and an argon propellant cylinder will be provided. The agent storage container will conform to ASME standards for unfixed pressure vessels. The system will be capable of discharging a minimum of 90% of the containerized agent without flow fluctuations or interruptions. The propellant gas cylinder will be replaceable within fifteen minutes by two crew members standing on the ground and be equipped with a cylinder replacement hoisting system. The propellant gas cylinder will be secured to withstand off-road operations. A pressure indicator will be visible to any person opening the tank fill cap. Blow-down piping will be directed beneath the vehicle. The Halotron I agent tank will include lifting rings and will have a nameplate indicating, as a minimum, the following:

a. Extinguishing agent.

b. Capacity.

c. Weight full.

d. Weight empty.

e. Operating pressure.

f. Hydrostatic test date.

g. Type of agent required for re-servicing.

3.8.2. Halotron I hose reel. A Halotron I hose reel will be provided in a compartment on the side of the vehicle. The reel will include 150 ft. of 1 in. booster type hose and an appropriate nozzle. The hose reel will be equipped with an electric rewind motor with manual rewind provisions and rollers to facilitate hose deployment. A tension device will be installed to prevent the hose from inadvertently unreeling. The nozzle will be capable of discharging a minimum of 5 lb. / sec. of Halotron I agent in accordance with the performance requirements of the A/C. Controls at the reel will allow charging of the Halotron I agent in the agent storage container, and into the handline.

3.8.3. Halotron I system charging cylinder. One (1) 400 cu. ft. argon cylinder with an integral pressure gauge bottle will be provided for discharging the vehicle mounted Halotron I system. One (1) spare 400 cu. ft. argon cylinder will be provided. Each cylinder will have sufficient capacity to discharge all of the Halotron I agent in the agent storage container and perform a blow down operation of the system without requiring a cylinder change. A means of lifting the argon cylinder to its stored position or lowering it to ground level will be provided. The design will be such that it will allow one person to safely perform the argon cylinder re-servicing on the vehicle. The lifting/lowering mechanism will be stored on the vehicle adjacent to the nitrogen cylinder storage area. This storage provision must accommodate for the braking and for the high G forces experienced during off road travel as described in this specification.

3.9 Electrical systems and warning devices. The vehicle will have a 12-volt or 24-volt electrical and starting system in accordance with NFPA 414.

3.9.1 Alternator. An appropriate charging system, in accordance with NFPA 414, will be provided. The minimum continuous electrical load will include operation of the air conditioning system.

3.9.2 Batteries. Batteries will be of the maintenance-free type; addition of water will not be required during normal service life. The battery cover and vent system will be designed to prevent electrolyte loss during service and to keep the top of the battery free from electrolyte.

3.9.2.1 Battery compartment. The batteries will be enclosed in a weatherproof enclosure, cover, or compartment and be readily accessible.

3.9.3 Battery charger or conditioner. The vehicle will have a DC taper type battery charger or an automatic battery conditioner, or voltage monitoring system, providing a minimum 12 amp output. The charger/conditioner will be permanently mounted on the vehicle in a properly ventilated, accessible location. The charger/conditioner will be powered from the electrical shoreline receptacle (see 3.10.1). A charging indicator will be installed next to the receptacle. When a battery conditioner is provided, the conditioner will monitor the battery state of charge and, as necessary, automatically charge or maintain the batteries without gassing, depleting fluid level, overheating, or overcharging. A slave receptacle will be provided at the rear or on either side of the vehicle cab. Battery jump studs may be installed on the exterior of the battery box in lieu of a slave receptacle.

3.9.4 Electromagnetic interference. The vehicle electrical system will be in accordance with SAE J551-2 for electromagnetic interference.

3.9.5 Work lighting.

3.9.5.1 Cab interior lights. Cab interior light levels will be sufficient for reading maps or manuals. At least one red and one white cab interior dome light will be provided.

3.9.5.2 Compartment lights. White lighting sufficient to provide an average minimum illumination of 1.0 footcandle will be provided in each compartment greater than 4.0 cubic feet and having an opening greater than

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Compartment lights cont.

144 square inches. Where a shelf is provided, this illumination will be provided both above and below the shelf. All compartments will be provided with weatherproof lights that are switched to automatically illuminate when compartment doors are opened and the vehicle master switch is in the .on. position. Light switches will be of the magnetic (non-mechanical) type.

3.9.5.3 Ladder, step, walkway, and area lights. Non-glare white or amber lighting will be provided at ladders and access steps where personnel work or climb during night operations. In addition, ground lighting will be provided. Ground lights will be activated when the parking brake is set in accordance with AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles. These area lights will be controlled with three-way switches on the cab instrument panel and near the light sources. The switch located in the cab will be a master switch and must be turned on before auxiliary switches near the light sources are operational.

3.9.5.4 Spot/Floodlights. Two spot/floodlights will be attached at the end of the primary turret or at the end of the HRET assembly. The lights will illuminate the area covered by the turret. Both lights will be controlled from switches in the cab. LED lights will be used.

3.9.5.5 Flood Lights. Two telescoping floodlights will be provided. One light will be mounted on the left and right sides of the vehicle. 250W LED lights will be used. Both lights will be mounted on extension tubes and controlled from switches in the cab and manually raised. To prevent these lights from accidental damage, the cab will be equipped with a visual warning signal to alert the driver if the lights are inadvertently left in the "up" position.

3.9.5.6 Scene Lights. A total of six high mounted floodlights will be provided to illuminate the work areas around the vehicle. Two lights will be mounted on the front and two will be mounted on each side of the vehicle. The

Scene Lights cont.

lights will be powered by the vehicle alternator driven system or auxiliary generator, and the lights in the front will be controlled from switches in the cab. LED lights will be used.

3.9.6 Audible warning devices.

3.9.6.1 Siren. The vehicle will be equipped with an electronic siren system. The amplifier unit will include volume control and selection of "Radio," "PA," "Manual," "Yelp," "Wail," and "Hi-Lo" (European) modes, and a magnetic noise canceling microphone. The amplifier, microphone, and controls will be within reach of the driver and the turret operator.
Siren activating foot switches will be located in front of the driver and the turret operator. The siren speaker will be rated at 100 watts minimum and will be located in a guarded position as low and as far forward on the vehicle as practical.

3.9.6.2 Horn. Dual forward facing air horns will be installed in protected locations near the front of the vehicle. Air horn activating foot switches will be located in front of the driver and the turret operator.

3.9.7 Emergency warning lights. All emergency warning lights must meet the requirements of AC 150/5210-5. Where applicable, LED lights will be used as the primary light type. Lighting units will be installed on the top front, sides, and rear of the vehicle to provide 360° visibility. A switch will be provided on the instrument panel to control all of the top, side, front and rear emergency warning lights. A switch will also be provided on the instrument panel to disable all lower emergency warning lights when desired. All lighting systems will meet NFPA 414 emergency lighting criteria.

3.9.7.1 Emergency warning light color. All emergency warning lights will meet the requirements of AC 150/5210-5.

3.9.7.2 Headlight flashing system. A high beam, alternating/flashing, headlight system will be provided. The headlight flasher will be separately switched from the warning light panel.

3.9.8 Radio circuit. The vehicle will have three separate 30 amp circuits with breakers and connections provided in a space adjacent to the driver and turret operator for installation of radios and other communications equipment after the vehicle has been delivered. To facilitate the installation of the communications equipment the manufacturer will provide three antennas pre-installed on top of the cab.

3.9.9 Power receptacles.

3.9.9.1 Primary power receptacles. The vehicle will have two duplex 15-amp 110-volt power receptacles, one installed adjacent to the cab door on each side of the vehicle. Each duplex receptacle will include one straight blade and one twist-lock connection. These outlets will be powered by the generator.

3.9.9.2 Auxiliary power receptacles. The vehicle will have 2-12-volt auxiliary power receptacles mounted adjacent to the driver and crew member positions, preferably in the instrument panel.

3.9.9.3 Cable reel. The vehicle will be equipped with an electrical cable reel, located within a compartment. The reel will be equipped with 200 feet of 20 amp, 600 volt; 90°C insulated electrical cable. The electrical cable will be equipped with a rubber ball stop to prevent cable pull through during rewinding operations. A four-way roller guide will be provided on the cable reel to prevent chafing of cable insulation. The cable reel will have an electric

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Cable reel cont.

rewind motor with provisions for manual rewind in the event of motor failure; the manual rewind handle will be securely stored near the cable reel. A portable weatherproof duplex outlet box, with built-in circuit breakers and twist-lock receptacles, will be provided for on the cable end. The cable reel will be powered by the auxiliary generator.

3.9.10 Auxiliary generator. A minimum 10 kilowatt (kW) (continuous rating), 120/240-volt, 60 hertz, diesel, hydraulic or split shaft Power Takeoff (PTO)-driven generator will be provided.

3.10 Line voltage electrical system.

3.10.1 Electrical shoreline connection. The battery charger/conditioner will be powered from a covered, polarized, insulated, labeled, recessed (flush mounted), male, 110 volt AC auto-eject receptacle. The connection will be located on the exterior of the vehicle at the rear or on either side of the cab. A weatherproof charge meter will be installed next to the receptacle. A 15 amp rated, 110-120-volt, AC straight blade (non twist-lock) connector will be provided.

3.11 Air systems.

3.11.1 Air hose reel. An air hose reel will be provided in an enclosed compartment on the vehicle. The hose Reel will be equipped with 200 feet of 3/8 inch I.D. hoseline. A 3/8 inch National Pipe Taper (NPT) fitting and Female style quick connect will be connected to the end of the hoseline. A four-way roller guide will be provided for the hose reel to prevent hose chafing and kinking. The hoseline will be equipped with a rubber ball stop to prevent hose pull through on roller guides during rewinding operations. The hose reel will have an electric rewind motor and provisions for manual rewind in the event of motor failure; the manual rewind

Air hose reel cont.

handle will be securely stored near the hose reel. A pressure protected air supply from the chassis air system will be connected to the hose reel. The air supply lines will be routed with minimum beads and located or guarded from the carried equipment.

3.12 Quality of Workmanship. The vehicle, including all parts and accessories, will be fabricated in a thoroughly workmanlike manner. Particular attention will be given to freedom from blemishes, burrs, defects, and sharp edges; accuracy of dimensions, radii of fillets, and marking of parts and assemblies; thoroughness of welding, brazing, soldering, riveting, and painting; alignment of parts; tightness of fasteners; et cetera. The vehicle will be thoroughly cleaned of all foreign matter.

NO SECTION 4 – NOT REQUIRED

5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. Performance inspection (see 5.2).
b. Conformance inspection (see 5.3).

5.2 Performance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, schedule, and facilities.

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5.3 Conformance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, and facilities.

5.4 Product conformance. The products provided will meet the performance characteristics of this PS, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The purchaser reserves the right to require proof of such conformance.

5.5 Technical proposal. The offeror/contractor will provide an itemized technical proposal that describes how the proposed model complies with each characteristic of this PS; a paragraph by paragraph response to the characteristics section of this PS will be provided. The offeror/contractor will provide two copies of their commercial descriptive catalogs with their offer as supporting reference to the itemized technical proposal. The offeror/contractor will identify all modifications made to their commercial model in order to comply with the requirements herein. The vehicle furnished will comply with the "commercial item" definition of FAR 2.101 as of the date of award. The purchaser reserves the right to require the offeror/contractor to prove that their product complies with the referenced commerciality requirements and each conformance/performance characteristics of this PS.

5.6 Inspection requirements.

5.6.1 General inspection requirements. Apparatus used in conjunction with the inspections specified herein will be laboratory precision type, calibrated at proper intervals to ensure laboratory accuracy.

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5.6.2 Test rejection criteria. Throughout all tests specified herein, the vehicle will be closely observed for the following conditions, which will be cause for rejection:

a. Failure to conform to design or performance requirements specified herein or in the contractor's technical proposal.

b. Any spillage or leakage of any liquid, including fuel, coolant, lubricant, or hydraulic fluid, under any condition, except as allowed herein.

c. Structural failure of any component, including permanent deformation, or evidence of impending failure.

d. Evidence of excessive wear.

e. Interference between the vehicle components or between the vehicle, the ground, and all required obstacles, with the exception of normal contact by the tires.

f. Misalignment of components.

g. Evidence of undesirable roadability characteristics, including instability in handling during cornering, braking, and while traversing all required terrain.

h. Conditions that present a safety hazard to personnel during operation, servicing, or maintenance.

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Test rejection criteria cont.

i. Overheating of the engine, transmission, or any other vehicle component.

j. Evidence of corrosion.

k. Failure of the fire fighting system and sub-systems.

5.6.3 Detailed inspection requirements.

5.6.3.1 Examination of product. All component manufacturers. certifications, as well as the prototype and production/operational vehicle testing outlined in Table 1, will be examined to verify compliance with the requirements herein. Attention will be given to materials, workmanship, dimensions, surface finishes, protective coatings and sealants and their application, welding, fastening, and markings. Proper operation of vehicle functions will be verified as defined by NFPA 414, Acceptance Criteria chapter. A copy of the vehicle manufacturer's certifications will be provided with each vehicle in accordance with NFPA 414.
The airport may accept a manufacturer or third party certification for any/all prototype and production/operational vehicle testing performed prior to delivery which proves that the vehicle meets the performance parameters of NFPA 414.

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Table 1. Vehicle Test Data

NFPA 414 paragraph	Test
Production Vehicle Operational Tests (NFPA 414 -Section 6.4)	
(6.4.1)	Vehicle Testing, Side Slope
(6.4.2)	Weight / Weight Distribution
(6.4.3)	Acceleration. **NOTE:** With the modification that the instrumentation must be a GPS-based Electronic data collection system.
(6.4.4)	Top Speed
(6.4.5)	Brake Operational Test
(6.4.6)	Air System / Air Compressor Test
(6.4.7)	Agent Discharge Pumping Test
(6.4.8)	Dual Pumping System Test (As Applicable)
(6.4.9)	Pump and Maneuver Test
(6.4.10)	Hydrostatic Pressure Test
(6.4.11)	Foam Concentration Test
(6.4.12)	Primary Turret Flow Rate Test
(6.4.13)	Piercing/Penetration Nozzle Testing (As Applicable)
Prototype Vehicle Tests (NFPA 414 – Section 6.3)	
(6.3.1)	Rated Water and Foam Tank Capacity Test
(6.3.2)	Corner Stability. **NOTE:** With the modification that the evasive maneuver/double-lane change test must be conducted at 35 mph (56 kph).
(6.3.3)	Vehicle Dimensions
(6.3.4)	Driver Vision Measurement
(6.3.5)	Pump and Roll on a 40 Percent Grade
(6.3.6)	Electrical Charging System
(6.3.7)	Radio Suppression
(6.3.8)	Gradability Test

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NFPA 414 paragraph	Test
(6.3.9)	Body and Chassis Flexibility Test
(6.3.10)	Service/Emergency Brake Test
(6.3.11)	Service/Emergency Brake Grade Holding Test
(6.3.12)	Steering Control Test
(6.3.13)	Vehicle Clearance Circle Test
(6.3.14)	Agent Pump(s)/Tank Vent Discharge Test
(6.3.15)	Water Tank Fill and Overflow Test
(6.3.16)	Flushing System Test
(6.3.17)	Primary Turret Flow Rate Test
(6.3.18)	Primary Turret Pattern Test
(6.3.19)	Primary Turret Control Force Measurement
(6.3.20)	Primary Turret Articulation Test
(6.3.21)	Handline Nozzle Flow Rate Test
(6.3.22)	Handline Nozzle Pattern Test
(6.3.23)	Ground Sweep/Bumper Turret Flow Rate Test
(6.3.24)	Ground Sweep/Bumper Turret Pattern Control Test
(6.3.25)	Undertruck Nozzle Test
(6.3.26)	Foam Concentration/Foam Quality Test
(6.3.27)	Warning Siren Test
(6.3.28)	Propellant Gas
(6.3.29)	Pressure Regulation
(6.3.30)	AFFF Premix Piping and Valves
(6.3.31)	Pressurized Agent Purging and Venting
(6.3.32)	Complementary Agent Handline Flow Rate and Range
(6.3.33)	Dry Chemical Turret Flow Rate and Range
(6.3.34)	Cab Interior Noise Test

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6. PACKAGING.

6.1 Preservation, packing, and marking will be as specified in the Procurement Specification, contract or delivery order.

6.2 The vehicle must be delivered with full operational quantities of lubricants, brake and hydraulic fluids, and cooling system fluid all of which must be suitable for use in the temperature range expected at the airport.

6.3 The vehicle must be delivered with one complete load of firefighting agents and propellants. One complete load is defined as all of the agents and propellants necessary for the vehicle to be fully operational. One load would include, at a minimum: one fill of a foam tank; one fill of a dry chemical tank (if applicable); one fill of a halogenated tank (if applicable); one spare nitrogen cylinder for a dry chemical system (if applicable); and one spare argon cylinder for a halogenated system (if applicable). Agents and propellants for required testing or training are not included. For the initial training period, water should be used in place of other extinguishing agents. The manufacturer may pre-ship agents and propellants to a receiving airport to reduce overall procurement costs.

6.4. The vehicle manufacturer must provide initial adjustments to the vehicle for operational readiness and mount any ancillary appliances purchased through the vehicle manufacturer as part of the vehicle.

7. TRAINING.

7.1 Upon delivery of the vehicle to the airport, the manufacturer must, at no additional cost, provide the services of a qualified technician for eight consecutive days for training. This is considered sufficient time for the purchaser to adjust shift work schedules to get maximum employee attendance to training sessions at some point during the training period.

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Training cont.

During this time sufficient repetitive learning opportunities must be provided by the manufacturer to allow various shifts to complete the training requirements.

7.2 The technician must provide thorough instruction in the use, operation, maintenance and testing of the vehicle. This setup must include operator training for the primary operators, which will give them sufficient knowledge to train other personnel in the functional use of all firefighting and vehicle operating systems. Prior to leaving the vehicle, the technician should review the maintenance instructions with the purchaser's personnel to acquaint them with maintenance procedures as well as how to obtain support service for the vehicle.

7.3 Training must include written operating instructions, electronic training aids (videos/power point), or other graphics that depict the step-by-step operation of the vehicle. Written instructions must include materials that can be used to train subsequent new operators.

8. REFERENCED DOCUMENTS.

8.1 Source of documents.

8.1.1 The CFR may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402.

Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports (14 CFR Part 139)

Section 139.315 Aircraft Rescue and Firefighting: Index Determination.

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Source of documents cont.

Section 139.317 Aircraft Rescue and Firefighting: Equipment and Agents.

Section 139.319 Aircraft Rescue and Firefighting: Operational Requirements.

Title 49; Code of Federal Regulations (CFR), Part 393: Parts and Accessories Necessary for Safe Operation: Subpart C. Brakes.

Title 49; Code of Federal Regulations (CFR), Part 571, Motor Carrier Vehicle Safety Standards, Part 209, Standard No. 209; Seat Belt Assemblies.

8.1.2 SAE documents may be obtained from SAE, Inc., 400 Commonwealth Drive, Warrendale PA 15096.

8.1.3 National Fire Protection Association (NFPA): NFPA documents may be obtained from NFPA, Batterymarch Park, Quincy MA 02269-9101.

NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment (2009 Edition)

NFPA 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition)

NFPA 1901, Standard for Automotive Fire Apparatus (2009 Edition)

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8.1.4 Federal Aviation Administration (FAA): FAA ACs may be obtained from the FAA website: http://www.faa.gov/regulations_policies/advisory_circulars/

AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles

AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport

FAA Orders, Specifications, and Drawings may be obtained from: Federal Aviation Administration, ATO-W CM-NAS Documentation, Control Center, 800 Independence Avenue, SW, Washington, DC 20591. Telephone: (202) 548-5256, FAX: (202) 548-5501 and website: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/atc_facilities/cm/cm_documentation/

9. AIRFIELD TRANSPONDER. To include one (1) Veelo Nextgen PC Configuration kit and one (1) Veelo Nextgen Vehicle locator.
Equipment must be compatible with existing FAA Air Traffic Control Tower Multistatic Dependent Surveillance, Multi Latration and ADS-B System. NO DEVIATIONS ALLOWED.

CITY OF ST LOUIS, MISSOURI
INSTRUCTION TO BIDDERS (for request for quotations - RFQs)

VENDORS SHOULD CAREFULLY READ THE FOLLOWING INSTRUCTIONS AND TERMS AND CONDITIONS, BEFORE SUBMITTING QUOTATION. **CAUTION: THIS IS NOT AN ORDER**

- Quotations will only be accepted on this form which must be returned in a **sealed envelope**. *The upper left corner of the envelope must include the following information: Vendor Name, Quotation Number and the Due By Date.* This information is also required on any mail delivered next day or overnight.
- Quotations should be typewritten or in ink. Altered or erased unit price(s) must be initialed. One copy of Quotation Sheet must be submitted, please retain a copy for your files.
- The Supply Commissioner reserves the right to reject any or all bids.
- The Supply Commissioner reserves the right to make awards on an item basis or on a total basis.
- Bidders must quote Unit Price(s) and Extension on each item. When an error appears on an extension, the Unit Price(s) will govern.
- When Quotation Sheet requests item(s) by brand name and your quote is for an alternate brand – show brand name(s) with model number(s) and attach full specifications.
- When Quotation Sheet has only a general description(s) of item(s) required – show brand name with model number(s) and attach full specifications.
- Suppliers shall not offer more than one bid on each item. Two or more quotations on the same item may cause a rejection of the bid. Suppliers must determine which one of their many styles or types fully meet the specification.
- Freight or delivery charges must be included in quote, or shown separately on quote, so bid can be evaluated.
- **Bids must arrive no later than NOON** on the date stated or will be rejected. Faxed or E-mailed bids are not accepted unless specifically requested.
- Bids will be publicly opened on the date specified beginning at NOON.
- Prices quoted will be considered firm.
- Bids having an acceptance limit of less than 30 days after opening date may be rejected.
- Time of proposed delivery must be stated in definite terms.
- Failure of Bidder to understand the item(s) requested or any part of the specifications will not be a valid reason for bidding on the wrong item(s). Any questions regarding description of item(s) requested should be cleared with the Buyer listed in the bid document.
- **Samples** when requested must be delivered before actual time of bid opening with each sample plainly tagged showing the name of Bidder, Quotation Number, Brand Name and lot number or quality. Submission of samples does not relieve bidder from meeting the specifications as outlined in the Bid Documents unless the bidder specifically states they are bidding on an alternate.
- All samples are to be submitted to the address listed below unless otherwise stated in Bid Documents.
- Deliveries must be accompanied by a packing slip or invoice, listing the Department, Quotation Number, and the exact quantities of each item included in the shipment.
- ONLY U.S.P., N.F., OR N.N.D. DRUGS ARE ACCEPTABLE. ALL DRUGS MUST COME IN MANUFACTURER'S ORIGINAL PACKAGES, PROPERLY SEALED.
- In the event the successful bidder fails to make delivery of any item or items that meet the conditions and requirements as outlined in this proposal within 7 days of time stated by bidder on face of this quotation sheet, the City reserves the right to purchase said item or items on the "OPEN MARKET" and charge any costs above the BID PRICE to the bidder.
- The laws of the State of Missouri provide that the City of St. Louis pay no State Sales or Use Tax or Federal Excise Taxes and these taxes should be excluded from your bid price. Federal Excise Tax Exemption Certificates will be furnished to successful bidder.
- Suppliers shall save harmless the City of St. Louis from the payment of any and all claims or demands arising out of any infringement, alleged infringement, or use of any patent or patented device, article, system, arrangement, material or process used by him in the execution of this contract.

- Supply Division hours are Monday through Friday – 8:00 A.M. to 5:00 P.M. Main Number: 314-622-4580.

All bids must be submitted in a SEALED ENVELOPE and mailed to:

SUPPLY COMMISSIONER
1200 MARKET ST RM 324
ST LOUIS MO 63103-2842

CITY OF ST. LOUIS
DEPARTMENT OF FINANCE
OFFICE OF THE SUPPLY COMMISSIONER

FREDDIE L. DUNLAP
SUPPLY COMMISSIONER

FRANCIS G. SLAY
MAYOR

1200 MARKET STREET
ROOM 324
ST LOUIS, MO 63103-2819
(T): (314) 622-4580
(F): (314) 622-4141

ATTENTION BIDDERS

Please carefully review all information requested in this bid package.

Failure to submit requested samples, literature or any other requested information may result in disqualification of your bid or any portion of your bid.

Also the reasons indicated below may disqualify your bid. If you have any questions, call the buyer indicated in this bid package.

This form must be returned with your bid.

- Two or more bids submitted for one item, unless instructed to do so. (item rejected)
- Signature missing on bid or any required form.
- Buy American Form not completed or returned. (may be rejected)
- M/WBE Form not completed or returned. (may be rejected)
- Altered or erased unit prices must be initialed.
- Faxed bid, unless specifically requested (will be rejected).
- FOR CONTRACTS ONLY: Please provide your DUNS # _____
- FOR CONTRACTS ONLY: Failure to submit required Bond by the date indicated.

I certify that I have read and understand the information above.

_____ _____
Manual Signature Date

ST. LOUIS DOMESTIC PRODUCTS PROCUREMENT ACT

The City of St. Louis has enacted an ordinance relating to the purchase of domestic products by City government, with penalty provisions. The ordinance amends Section 5.58.010 Revised Code of the City of St. Louis, 1986, as amended by adding thereto new subsections dealing with the requirement that the Supply Commissioner or his designee give preference to goods or commodities manufactured in the United States of America, stating exceptions to said policy. Sections one through six are reprinted below.

Section One. Section 5.58.010 Revised Code of the City of St. Louis is hereby amended by adding the following language: Each solicitation to bid and the method of describing the items to be bid upon of any goods or commodities sought to be purchased by the Office of Supply Commissioner, and any contract entered into by and on behalf of the City of St. Louis and executed by the Mayor and/or the Comptroller of the City of St. Louis wherein the construction, alteration, repair or maintenance of any public works is the subject of the contract so executed, shall contain a provision that the goods or commodities furnished or used in the furtherance of said project by any contractor or subcontractor, manufacturer or supplier as the case may be, shall be manufactured, assembled or produced in the United States, and said requirement as defined above shall be stated in said bid.

Section Two. The provision of Section One of this Ordinance shall not apply in the following instances:

(i) Where the item purchased as the contract entered into for repairs or renovation is less than One Thousand ($1,000.00) Dollars.

(ii) Where no line of a particular good or product is manufactured, assembled or produced in the United States.

(iii) Where the acquisition of United States manufactured or produced goods would increase the cost by more than (10%) percent.

Section Three. The certificate required by this section shall specify the nature of the contract, the product being purchased or leased, the names and addresses of the United States manufacturers and producers contracted by the Commissioner or the project architect or engineer, and an indication that such manufacturers or producers could not supply sufficient quantities or that the price of the products would increase the cost of the contract by more than ten percent.

Section Four. No public agency may authorize, provide for, or make any payment to any vendor or contractor upon any contract in violation of section 2 of this act. Prior to the awarding of the bid and before any public agency authorizes, provides, or makes payment to any vendor or contractor upon any contract to which section 2 or 6 of this act applies, the vendor or contractor shall provide proof of compliance with section 2, and, if applicable, section 6 of this act. Any vendor or contractor who knowingly misrepresents any material fact to the public agency concerning the origin of any manufactured goods or commodities shall be guilty of a Class A misdemeanor.

Section Five. Sections 1 to 6 of this act shall apply only to contracts and subcontracts entered into after the effective date of this act, and shall not limit the use or supply of manufactured goods or commodities purchased or leased prior to the effective date of this act.

Section Six. Nothing in sections 1 or 6 of this act is intended to contravene any existing treaty, law, agreement, or regulation of the United States. All contracts under section 1 or 6 of this act shall be entered into in accordance with existing treaty, law, agreement, or regulation of the United States including all treaties entered into between foreign countries and the United States regarding export-import restrictions and international trade and shall not be in violation of sections 1 to 6 of this act to the extent of such accordance.

Interpretations and Guidelines

Section One: "Shall be manufactured" is interpreted to mean to make or process a raw material into a finished product or to turn-out in a mechanical manner. "Assembled" is interpreted to mean to fit or to join together the parts, gather, or to congregate in a manufacturing environment. "Produced" is interpreted to mean to create by manual or physical effort, to make or yield to customary product or products.

Section Two (I) This is interpreted to mean less than one thousand dollars in aggregate (total purchases).

(iii) When applying this subsection, multiply the cost of the foreign product by ten percent and compare the cost to the American product. If the American product cost is less than the sum of the cost of the foreign product plus ten percent, the award will be made to the vendor bidding the American product. The price paid by the City of St. Louis will be the actual price bid by the winning bidder.

Section Three: "Could not supply sufficient quantities" is interpreted to mean in order to meet the using agency's delivery schedule and in quantity specified.

Section Four: The vendor's authorized representative must complete a self-certification form, as required by the existing procedures previously indicated. These certification forms will be used to determine whether the manufacturer or producers could, or could not supply sufficient quantities, or the cost of the products would increase the contract by more than ten percent.

Prior to the City awarding the bid, the vendor shall provide certification that the product being bid is manufactured, assembled or produced in the United States or there is an existing treaty, law or regulation whereby the product bid shall be treated the same as product manufactured, assembled or produced in the United States. The procuring agency shall accept the self certification in order to apply the percentage differential that is applicable under this law. Failure to provide certification shall cause the city to presume that such product is not American made and preference shall not be considered for that product.

CERTIFICATION FORM
ST. LOUIS DOMESTIC PRODUCTS PROCUREMENT ACT
(BUY AMERICAN)

Bidders are advised of legislation enacted by the City of St. Louis which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured, assembled or produced in the United States, unless obtaining American made products would increase the cost of this contract by more than ten percent.

Section Four requires the vendor or contractor to certify his compliance with this legislation and if applicable, Section Six, if preference is claimed.

This legislation does not apply if the total bid is less than one thousand dollars ($1,000.00).

Bids received will be evaluated on the basis of this legislation. Certificates of compliance must be completed and returned to be considered for preference. Failure to provide certification shall cause the City to presume that such product is not American made.

☐ **CERTIFICATION**
If **all** the specified goods or products are manufactured, assembled or produced in the United States, check box at left and complete certification at the bottom of this form.

☐ **SECTION SIX CERTIFICATION**
If any or all of the specified goods or products are manufactured, assembled or produced in a country other than the "United States", and exemption is requested because such product is Fair Trade Product: (a) list the country, other than the United States, where each good or product you propose to furnish is manufactured, assembled or produced; (b) check box at left of this paragraph and list corresponding commodities and (c) complete Section Six Documentation portion below.

Item Number(s)	Location Where Item Manufactured, Assembled or Produced
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

☐ **SECTION SIX DOCUMENTATION**
The specified goods or products are treated as manufactured, assembled or produced in the United States under an existing treaty, law, agreement or regulation of the United States regarding export-import restrictions and international trade. List item Number(s) and Treaties covering item below.

_____

_____

_____

DEFINITIONS

MANUFACTURED - to make or process a raw material into a finished product; create, or to produce or to turn-out in a mechanical manner.
ASSEMBLED - to fit or join together the parts in a manufacturing environment.
PRODUCED - create by manual or physical effort, to make or yield the customary product or products.

MUST BE COMPLETED AND SIGNED

I hereby certify that the above information is true and correct and further certify that this statement complies with all provisions of Section 5.58.010 Revised Code of the City of St. Louis, 1985, as amended.

FIRM NAME: _____

ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

BY: _____
(SIGNATURE and TITLE)

CITY OF ST. LOUIS/SUPPLY DIVISION
MINORITY/WOMEN BUSINESS ENTERPRISES FORM
(M/WBE FORM)

A. Mayor's Executive Order #28, Section Six - Supply Contracts

1. The goal of the City of St. Louis is that 25% of the value of all contracts let and purchases made by the Supply Commissioner shall be let or made with Minority Business Enterprises (MBEs) and that 5% of the value of all contracts let and purchases made by the Supply Commissioner shall be let or made with Women's Business Enterprises (WBEs).
2. All contracts let by the Supply Division for the purchase or lease of materials, equipment, supplies, commodities or services, the estimated cost of which exceeds $500, shall be subject to this goal.
3. The methods by which the Supply Commissioner shall pursue this goal shall include but not be limited to the following:
   a. The Supply Commissioner shall solicit bids from minority business enterprises and women's business enterprises certified to supply the required materials, equipment, supplies or services;
   b. St. Louis Airport Authority (SLAA) shall provide the Supply Commissioner with a list of minority business enterprises and women's business enterprises qualified to provide each of those commodities that the Supply Commissioner indicates are required by the City;
   c. The Supply Commissioner shall notify SLAA prior to solicitation of bids whenever no such qualified businesses are available;
   d. SLAA shall attempt to identify such qualified businesses, and if successful, shall notify the Supply Commissioner of their availability; and
   e. The Supply Commissioner shall provide such minority business enterprises and women's business enterprises every practical opportunity to submit bids.
4. Joint ventures or mentor-protégé relationships between prime contractors and subcontractors with local MBE and WBE firms are encouraged.
5. Participation of MBE and WBE firms located outside the St. Louis Metropolitan Statistical Area (SMSA) shall not count toward the goals established in this order.

B. SUPPLY DIVISION POLICY

It is the policy of the Supply Division that all bids/contracts awarded adhere to the Mayor's Executive Order #28. All vendors are encouraged to comply with this policy and all other provisions of Executive Order #28. A copy of Executive Order #28 is available upon request. Each Vendor/ Contractor (bidder) must complete, sign and return this M/WBE Form. Failure to complete, sign and return the M/WBE Form will result in the bid being declared non responsive and your bid may be eliminated.

C. OBLIGATION

The bidder agrees to make a good faith effort to ensure that M/WBE businesses have an opportunity to participate in the performance of contracts or subcontracts financed in whole or in part with City funds. The bidder will take all necessary and reasonable steps to ensure that said businesses have an opportunity to compete for and perform under this bid/contract. The bidder shall not discriminate on the basis of race, color, national origin or sex in the award and performance of bids/contracts. The Directory of Disadvantaged, Minority and Women Owned Business Enterprises certified by the City of St. Louis, can be viewed at www.mwdbe.org.

CITY OF ST. LOUIS/SUPPLY DIVISION
MINORITY/WOMEN BUSINESS ENTERPRISES FORM
(M/WBE FORM)

D. BID/CONTRACT IDENTIFICATION

Bid #: _____ or Contract Name: _____

Opening Date: _____ Your Bid Total: $ _____

If your bid is $500 or higher, please complete Section 'E". We are NOT requesting information on how your company currently supports M/WBE suppliers. We want to know if there are opportunities you might consider to work with M/WBE suppliers for THIS SPECIFIC bid/contract.

E. ASSURANCE

MBE/WBE Goal: 25% MBE and 5% WBE (Minimum Participation)

I, acting in my capacity as an officer of the undersigned bidder(s) if a joint venture, hereby assure the City of St. Louis that on this bid/contract my company **will**: **(CHECK ONLY ONE)**

☐ **Meet or exceed the M/WBE goal with: _____% MBE and _____% WBE Participation**

Proposed MBE Vendor Name: _____ Amount $ _____

Item or materials to be supplied by MBE Vendor: _____

Proposed WBE Vendor Name: _____ Amount$ _____

Item or materials to be supplied by WBE Vendor: _____

☐ **Fail to meet the M/WBE goal, but made a good faith effort to meet the goals as follows:**

_____%MBE and _____% WBE Participation (Enter Proposed Vendor information above.)

☐ **Not meet the M/WBE goal for the following reasons(s):(Check All That Apply)**

	Our Company is an MBE certified by the State of:
	Our Company is a WBE certified by the State of:
	We have contacted suppliers listed in the SLAA Directory but have received no reply
	There are no subcontracting opportunities for this bid/contract
	We are a Dealer and the order will be drop-shipped from the manufacturer to the user
	We are the manufacturer and the order will be drop-shipped from the factory to the user
	A letter of explanation is attached
	Other reason: _____

FIRM NAME: _____ FEDERAL ID NUMBER: _____

SIGNATURE: _____ FAX NUMBER: _____

PRINTED NAME: _____ DATE: _____

TITLE: _____ E-MAIL: _____